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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,716	11/09/2001	Xiaobao Wang	9818-059-999	8298

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EXAMINER

LUU, AN T

ART UNIT PAPER NUMBER

2816

DATE MAILED: 08/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/037,716

Applicant(s)

WANG ET AL.

Examiner

An T. Luu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Applicant's Amendment filed on 6-26-03 has been received and entered in the case. The rejections set forth in the previous Office Action are maintained as indicated below.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, limitations "an input/output supply signal", line 6, and "the reference voltage signal" appear to represent the same signal since the reference voltage signal is seen at the output of the switching circuit which provides for a logic device.

As to claim 11, it appears to be misdescriptive because figure 1 shows the master control signal (VREF_CONTROL) being unrelated to the logic device (140). And limitation "the first supply signal is a core supply signal" makes no sense at all since "the first supply signal" and "the master control signal" refer to the same entity as recited on lines 2-3 of claim 8.

As to claim 20, the limitation recited on lines 4-5 appears to be misdescriptive because figure 1 shows the master control signal (VREF_CONTROL) being unrelated to the logic device (140).

As to claim 29, it appears to be misdescriptive because there is none of the "logic device" in figure being supplied by both "dedicated supply" and "input/output supply".

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Claims 2-10, 12-19, 21-28 and 30-37 are rejected for being dependent on the rejected claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7, 19 and 29-36, to the extent to be understood, are rejected under 35 U.S.C. 102(b) as being anticipated by the Hoeld reference (U.S. Patent 5,639,680).

Hoeld discloses in figure 4 an apparatus comprising a transmission switch circuit (N1, P1 and P2) receiving a reference voltage signal at an input (terminal 12) and passing the reference voltage signal to an output (terminal OUT) in response to a first control signal (output of d2), the first control signal having a logic level determined by a dedicated supply signal Vcc and the dedicated supply signal being different from the reference voltage signal as required by claim 1.

As to claim 2, col. 1, lines 20-40 indicate that the inventive circuit of the cited reference is for solving problem when the reference voltage is higher than $V_{cc} + V_{be}$. Therefore, the circuit of the invention is inherently suitable for the dedicated voltage Vcc having a level higher than that of the reference voltage signal.

As to claim 3, it is inherent that Vcc is greater than 2.5V by convention standard for semiconductor circuit.

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As to claims 4 and 5, N1 is a NMOS transistor having a control terminal for receiving the first control signal.

As to claim 6, transistor N1 is shown to be configured as required by claim.

As to claim 7, transistor P1 is a PMOS transistor having gate terminal for receiving a second control signal (input to inverter d2) which is an inversion of the first control signal, the PMOS transistor is shown to be connected in parallel with the NMOS transistor.

As to claim 19, figure 1 of the cited reference shows more than one buffer coupled to the output of the switching circuit.

As to claims 29-36, Examiner believes that these claims, at best, recite method/steps derived from an apparatus recited on claims 1-7. Therefore, they are rejected for being directed to the method or/and steps derived from the apparatus described in claims above (i.e., steps each having a one-to-one correspondence to the corresponding elements of the apparatus).

Response to Arguments

5. Applicant's arguments filed 6-26-03 have been fully considered but they are not persuasive.

For the rejections under 35 USC 112

As to claim 1, Applicant has argued that limitations “an input/output supply signal” and “the reference voltage signal” represent two different signals. Examiner respectfully disagrees since recitation of claim calls for “providing a reference voltage signal to a logic device”.

Therefore, “a reference voltage signal” is seen to be provided to an input/output terminal of the

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logic device. In other words, this terminal receives “an input/output supply signal” which is “the reference voltage signal”. There is no limitation in claim which differentiates “an input/output supply signal” from “the reference voltage signal”. Applicant further points out that VREF is “the reference voltage signal” and VCC-IO is “an input/output supply signal” to support his position. Examiner does not believe this is a case because there is nothing in drawing being qualified to be “a logic device” to receive both “an input/output supply signal” and “the reference voltage signal” to support the fact that these two signals are distinct from each other.

As to claims 11 and 20, Examiner respectfully disagrees to Applicant’s argument on lines 3-11, page 10, of RESPONSE since there is nothing in claim 11 and its parent claims to specifically define “the logic device”. Examiner considered element 140 to be “the logic device” since it is the only element, other than transmission gate transistor, to receive “the reference signal”

For the rejections under 35 USC 102

As to claims 1 and 2, Applicant has made an argument based on the operation of Hoeld’s circuit and concluded that Hoeld does not teach each of the elements recited in claim 1. Examiner respectfully disagrees with Applicant’s position because figure 4 of Hoeld discloses each and every element required by claim. It is noted that “a logic device” is an element being coupled to the output terminal 22 since the circuit in figure 4 is seen as an intermediate step to provide a proper signal for further processing.

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Allowable Subject Matter

6. Claim 20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

7. Claims 8-18 and 37 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to disclose an apparatus comprising elements being configured as recited in claims. Specifically, none of the prior art teaches or fairly suggests, among other things, a level shift limitation as recited in claims.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

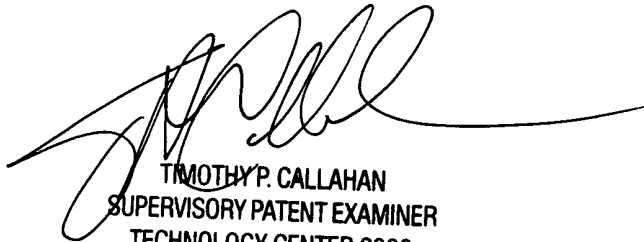
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to An T. Luu whose telephone number is 703-308-4922. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 703-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

An T. Luu *pn*
7-31-2003


TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800